

## HINGELESS ASSEMBLY FOR A DISPLAY SYSTEM

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention pertains in general to the field of portable, self-standing, modular display systems and in particular to the field of a hingeless extrusion which may be combined with other hingeless extrusions to form a multiple positionable modular display system.

#### 2. Description of the Prior Art

Portable, self-standing, modular display systems include vertical posts separated by a flat panel and wherein additional flat panels and vertical posts may be joined thereto to form a display arrangement whereby a vendor of goods, services, informational display services, or the like may advertise their goods or services on the flat plate sections. Such display systems are usually temporarily arranged and set up for non-fixed and non-permanent use such as for trade shows and other similar events. Further, such display systems may combine a number of different flat panels arranged at various angles to each other to result in a temporary display system which can be arranged into a large number of geometric configurations. It is further advantageous that these systems be easily assembled and taken apart and easily arranged into the different configurations but yet such that a relatively rigid structure which is free standing may be obtained.

To the above end, the prior art includes a number of differently shaped extrusions in combination with hinges which serve as the vertical posts of a modular display system. Moreover, the shapes of these vertical posts and hinges include provision for mounting between vertical posts a flat display panel which is used to display product information or services. In order to achieve all of the above objectives, the prior art vertical upright posts and hinges have complicated cross-sectional configurations and/or are used with other devices to achieve a free-standing display system which may be arranged into a large number of geometric configurations.

Accordingly, it is an object of the present invention to provide a hingeless assembly for use with a modular display system which is easy to assembly and disassembly and yet provide a rigid, non-permanent arrangement.

Another object of the present invention is to provide a hingeless assembly for a modular display system which allows for a large number of display arrangement configurations.

Yet another object of the present invention is to provide a hingeless assembly for a modular display system which requires only one cross-sectional shape for the vertical uprights of a display system and which allows for assembly to other vertical upright posts without any additional components.

### SUMMARY OF THE INVENTION

The present invention accomplishes the above-stated objectives as well as others by providing a hingeless assembly for a modular display system. The hingeless assembly is provided with a cross-sectional shape which allows flat panels to be attached thereto and allows for connection to other similarly-shaped hingeless assemblies. The hingeless assemblies provide for lockingly fastening of two panels along a straight line or three

panels in a triangular arrangement. Angles in between zero and ninety degrees between adjacent connector panels are also achievable by the present invention.

The hingeless assembly of the present invention comprises an extruded member having a cross-sectional shape which on one side provides for the attachment of flat plates thereto while the other side includes the shapes provided for both locking and rotationally fitting another hingeless assembly extrusion thereto. The display panel attachment section of the extruded shape comprises a plurality of spaced openings, any one of which may be fitted with a flat display panel. The locking and rotational attachment portion of the hingeless assembly includes a circularly-shaped extending portion and a circularly-shaped cup portion extending in a spaced parallel relationship to each other. When the extruded shapes are removably locked to each other, the circular shaped member of the one extrusion fits within the cup portion of the other extrusion while the cup portion of the first extrusion fits around the circular portion of the other extrusion. When assembled for rotation, only one of the circular portions and the cup portions of opposite hingeless assemblies are attached to each other. When one or more panels are joined to each other, a free-standing modular display system is obtained.

Various other objects, advantages and features of the invention will become apparent to those skilled in the art from the following discussion taken in conjunction with the following drawings, in which:

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 schematic representation of a typical modular display system to which the present invention may be applied;

FIG. 2 is a cross-sectional view of the single extruded shape capable of serving as the vertical upright posts of a hingeless modular display system;

FIG. 3 is a cross-sectional view of a typical display system wherein some panels are arranged in a straight line while other panels are arranged in an angle of between zero and ninety degrees to each other; and,

FIG. 4 is a cross-sectional view of three hingeless assemblies joined together in a triangular array with each of the hingeless assemblies being locked to another hingeless assembly.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

As required, detailed embodiments of the present invention are disclosed herein; however, it is to be understood that the disclosed embodiments are merely exemplary of the invention which may be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriately detailed structure.

Reference is now made to the drawings wherein like characteristics and features of the present invention shown in the various figures are designated by the same reference numerals.

Referring now to the various figures of the drawings, there is shown therein a typical modular display system 10 which may be obtained by using the hingeless assembly of the present invention. Such a display system is